Name:

p1106: Solve by factoring (v13)

1. Solve the equation

$$x^2 + 9x + 18 = 0$$

$$(x+3)(x+6) = 0$$
$$x = -6$$
$$x = -3$$

2. Solve the equation

$$x^2 - 10x + 21 = 0$$

$$(x-3)(x-7) = 0$$
$$x = 7$$
$$x = 3$$

3. Solve the equation

$$7x^2 + 2x - 11 \;=\; 6x^2 - 5x - 3$$

$$x^2 + 7x - 8 = 0$$
$$(x+8)(x-1) = 0$$
$$x = 1$$
$$x = -8$$

4. Solve the equation

$$5x^2 + 2x + 2 \;=\; 4x^2 + x + 8$$

$$x^2 + x - 6 = 0$$
$$(x-2)(x+3) = 0$$
$$x = -3$$
$$x = 2$$

5. Solve the equation

$$9x^2 + 3x - 17 \;=\; 8x^2 - 2x - 3$$

$$x^2 + 5x - 14 = 0$$
$$(x+7)(x-2) = 0$$
$$x = 2$$
$$x = -7$$

6. Solve the equation

$$2x^2 - 19x + 9 = 0$$

$$(2x - 1)(x - 9) = 0$$
$$x = 9$$
$$x = \frac{1}{2}$$

7. Solve the equation

$$2x^2 + 13x - 24 = 0$$

$$(2x - 3)(x + 8) = 0$$
$$x = -8$$
$$x = \frac{3}{2}$$

8. Solve the equation

$$7x^2 - 19x + 12 \;=\; 2x^2 + 9x - 3$$

$$5x^2 - 28x + 15 = 0$$
$$(5x - 3)(x - 5) = 0$$
$$x = 5$$
$$x = \frac{3}{5}$$

9. Solve the equation

$$13x^2 + 34x + 28 \;=\; 6x^2 + 4x + 1$$

$$7x^2 + 30x + 27 = 0$$
$$(7x + 9)(x + 3) = 0$$
$$x = -3$$
$$x = \frac{-9}{7}$$

10. Solve the equation

$$4x^2 - 20x - 27 \;=\; x^2 - 7x + 3$$

$$3x^2 - 13x - 30 = 0$$
$$(3x + 5)(x - 6) = 0$$
$$x = 6$$
$$x = \frac{-5}{3}$$